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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,508	01/09/2002	Yuji Ito	576P044	9104

7590

02/25/2004

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EXAMINER

SELLERS, ROBERT E

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/030,508

Applicant(s)

ITO ET AL.

Examiner

Robert Sellers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1, 5, 7 and 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. Claims 1 and 11-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Claims 5 and 7 are directed to the non-elected species of a water-absorptive natural polymer. Election was made **without** traverse in the response filed January 26, 2004.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 9 requires the presence of water. Page 15, lines 7-11 states that the amount of water must be controlled such that preliminary water absorption is prevented from occurring in the water-absorptive polymer which would compromise its water absorbing capability upon use. Accordingly, the claimed leakage water cut-off agent is not fully enabled unless the viscosity is 200 cP or more when water is present which ensures the retention of water-absorbing capacity of the water-absorptive polymer.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 does not further limit claim 9 which is dependent upon independent claim 2 and affirmatively defines the further presence of gellant (c). More favorable consideration would be given to the insertion of the phrase "and (c) gellant" after "polymer" in claim 10, line 2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. WO 99/29798 which is an equivalent of U.S. Publication No. 2002/0055558 to Maehara et al.
5. The PCT publication is the equivalent of the U.S. publication based on the mutual Japanese priority application no. PCT/JP98/05492. The PCT publication is relied upon based on its publication date of June 17, 1999 which antedates the earliest Japanese priority date of the instant application of July 15, 1999. The U.S. publication will be referenced due to its English disclosure.

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6. Maehara et al. (page 1, paragraph [0006]) sets forth a permeable water cut-off agent comprising a gellable hydrophilic resin such as the elected species of sodium polyacrylate which is most preferred (page 2, paragraph [0040], lines 24-26), a gellant such as the elected species of Ca-type silicates (page 3, paragraph [0044], lines 7-10) which are especially preferred (page 3, second column, lines 1-3), a surfactant such as polyoxyethylene glycols (page 3, paragraph [0047], line 9) and/or a polyalcohol such as polyethylene glycol (page 5, paragraph [0090], last line) and water (page 5, paragraph [0087], the sentence bridging the first and second columns).

7. The claimed alkylene glycol derivatives with at least C<sub>2</sub> repeated units such as polyethylene glycol is not exemplified. Page 9, Example B1 of Maehara et al. shows sodium polyacrylate, bentonite and glycerin as the polyalcohol. It would have been obvious to employ the polyethylene glycol disclosed in Maehara et al. with the exemplified sodium polyacrylate and bentonite which "promotes the penetration of leak-preventing component such as the gel of the hydrophilic resin and others . . . into leakage sites (page 3, paragraph [0047], lines 3-6)" and "for preventing the [permeable water cut-off] agent from freezing in its use (in spreading) in a open air whose temperature may be below-freezing point (page 5, paragraph [0089])."

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8. Claims 2-4, 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. 2-245062 in view of Maehara et al.
9. The Japanese patent espouses a water-stopping sealant (Derwent abstract, second page, Use/Advantage section) containing a water-absorptive resin such as a crosslinked polymer of acrylic acid salt, a polyalkylene oxide and a surfactant. The claimed gellant is not recited.
10. Maehara et al. is described hereinabove. It would have been obvious to blend the gellant of Maehara et al. with the crosslinked polymer of acrylic acid salt of the Japanese patent in order to gelatinize the polymer into a water-insoluble gel, thereby facilitating access to leakage sites for sealing and preventing subsequent dissolution upon exposure to water (Maehara et al., page 3, paragraph [0045]).

(571) 272-1093 (Fax no. (703) 872-9306)  
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Any administrative inquiries can be obtained by accessing the Patent Application Information Retrieval (PAIR) system. Published applications are available through either private or public PAIR. Unpublished applications are available via private PAIR only. Consult <http://pair-direct.uspto.gov> or contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



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Art Unit 1712